```java
import java.util.Scanner;

class Student
{
    String name;
    String usn;
    int credits[] = new int[8];
    int marks[] = new int[8];
    double sgpa=0.0;
    double cgpa;
    int grade[] = new int[8];

    double calculate(int m[], int c[])
    {
        int j;
        double sum = 0.0;
        int div = 0;
        for (j = 0; j < 8; j++)
        {
            if (m[j] != 100)
            {
                grade[j] = (m[j] + 10) / 10;
            }
            else
            {
                grade[j] = 10;
            }
            div = credits[j] + div;
            sum = sum + (grade[j] * credits[j]);
            System.out.println("Grade for subject " + (j + 1) + ": " + grade[j]); // error check
        }
```

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        sgpa = sum / div;

        System.out.println("SGPA: " + sgpa);

        return sgpa;

    }

        double calcgpa(double sgpa1, double sgpa2)

        {

                cgpa=(sgpa1+sgpa2)/2;

                return cgpa;

        }

        void input()

        {

        Scanner sc=new Scanner(System.in);

        System.out.println("Now enter subject credits for semester:");

        int i;

        for (i = 0; i < 8; i++)

        {

            credits[i] = sc.nextInt();

        }

        System.out.println("Now enter subject marks for semester:");

        for (i = 0; i < 8; i++)

        {

            marks[i] = sc.nextInt();

        }

        }


    public static void main(String args[]) {

        Scanner sc1 = new Scanner(System.in);

        System.out.println("Enter number of students: ");

        int n=sc1.nextInt();

        Student obj[]=new Student[n];

        int k;
```

```java
        for(k=0;k<n;k++)
        {
        obj[k]=new Student();
        System.out.println("Enter Student name: ");
    String name = sc1.next();
        System.out.println("Enter Student USN: ");
    String usn = sc1.next();
        obj[k].input();
        System.out.println("Semester 1");
    double result = obj[k].calculate(obj[k].marks, obj[k].credits);
    System.out.println("1st Semester SGPA for " + obj[k].name + " (" + obj[k].usn + ") is: " + result);
        System.out.println("Semester 2");
        obj[k].input();
    double result2 = obj[k].calculate(obj[k].marks, obj[k].credits);
    System.out.println("2nt Semester SGPA for " + obj[k].name + " (" + obj[k].usn + ") is: " + result2);
        System.out.println("CGPA for 1st year is : "+obj[k].calcgpa(result,result2));
        }
    }
}
```

```
C:\Users\Admin>d:

D:\>cd 1bm3cs008

D:\1bm3cs008>javac SGPA.java

D:\1bm3cs008>java Student
Enter number of students:
3
Enter Student name:
a
Enter Student USN:
a
Now enter subject credits for semester:
3
3
3

3
3
3
3
3
Now enter subject marks for semester:
100
100
100
100
100
100
100
100
Semester 1
Grade for subject 1: 10
Grade for subject 2: 10
Grade for subject 3: 10
Grade for subject 4: 10
Grade for subject 5: 10
Grade for subject 6: 10
Grade for subject 7: 10
Grade for subject 8: 10
SGPA: 10.0
1st Semester SGPA for null (null) is: 10.0
Semester 2
Now enter subject credits for semester:
3
3
3
3
3
3
3
3
Now enter subject marks for semester:
100
100
100
100
100
100
```

```
100
100
100
100
100
100
100
100
Grade for subject 1: 10
Grade for subject 2: 10
Grade for subject 3: 10
Grade for subject 4: 10
Grade for subject 5: 10
Grade for subject 6: 10
Grade for subject 7: 10
Grade for subject 8: 10
SGPA: 10.0
2nt Semester SGPA for null (null) is: 10.0
CGPA for 1st year is : 10.0
Enter Student name:
bcd
Enter Student USN:
bcd
Now enter subject credits for semester:
3
3
3
3
3
3
3
3
Now enter subject marks for semester:
100
100
100
100
100
100
100
100
Semester 1
Grade for subject 1: 10
Grade for subject 2: 10
Grade for subject 3: 10
Grade for subject 4: 10
Grade for subject 5: 10
Grade for subject 6: 10
Grade for subject 7: 10
Grade for subject 8: 10
SGPA: 10.0
1st Semester SGPA for null (null) is: 10.0
Semester 2
Now enter subject credits for semester:
3
3
3
3
3
3
3
3
Now enter subject marks for semester:
```

```
100
100
100
100
10
00
100
100
Grade for subject 1: 10
Grade for subject 2: 10
Grade for subject 3: 10
Grade for subject 4: 10
Grade for subject 5: 2
Grade for subject 6: 1
Grade for subject 7: 10
Grade for subject 8: 10
SGPA: 7.875
2nt Semester SGPA for null (null) is: 7.875
CGPA for 1st year is : 8.9375
Enter Student name:
abh
Enter Student USN:
aan
Now enter subject credits for semester:
3
3
3
3
3
3
3
3
Now enter subject marks for semester:
3
100
100
10
10
60
70
80
Semester 1
Grade for subject 1: 1
Grade for subject 2: 10
Grade for subject 3: 10
Grade for subject 4: 2
Grade for subject 5: 2
Grade for subject 6: 7
Grade for subject 7: 8
Grade for subject 8: 9
SGPA: 6.125
1st Semester SGPA for null (null) is: 6.125
Semester 2
Now enter subject credits for semester:
33
3
3
3
3
3
3
3
Now enter subject marks for semester:
```

```
10
20
00
50
60
20
20
20
Grade for subject 1: 2
Grade for subject 2: 3
Grade for subject 3: 1
Grade for subject 4: 6
Grade for subject 5: 7
Grade for subject 6: 3
Grade for subject 7: 3
Grade for subject 8: 3
SGPA: 2.6666666666666665
2nt Semester SGPA for null (null) is: 2.6666666666666665
CGPA for 1st year is : 4.395833333333333

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